

## Environmental Factors

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Canaveral National Seashore (CANA) is primarily a barrier island ecosystem. Water is the dominant feature, comprising over two-thirds of the park's 58,000 acres. The fragile barrier island is a mere ribbon of sand separating the Atlantic Ocean from Mosquito Lagoon. Storms and associated waves are a constant threat to breach the island from the east, while periods of high water erode the island from the lagoon side. Water quality is critical to the aquatic communities of the ocean and lagoon. Since the lagoon is basically enclosed, it flushes very slowly, magnifying pollution problems. Sandy soils along the lagoon are very porous and do little to retard pollutants such as septic tank effluent.

Lying in the "frost zone" of central Florida, the park contains a unique and fascinating combination of temperate and subtropical plant and animal species. Central Florida is also the lightning capital of North America, making wildfires a natural and regular part of the CANA ecosystem. As a result, the majority of terrestrial plant communities, and their associated animal species, are fire adapted. Active fire suppression, beginning in the 1950's, disrupted the process, altering native plant communities and allowing fuels to accumulate to dangerous levels. The park has recently implemented a fire management program to safely restore fire to its natural role in the CANA ecosystem (see Environmental Factors/Fire Regime).

Florida is plagued by the invasion of exotic (non-native) species that are impacting native plant and animal communities. Major threats include Brazilian pepper (*Schinus terebinthifolius*), Australian pine (*Casuarina equisetifolia*), cogon grass (*Imperata cylindrica*) and feral hog (*Sus scrofa*). Other species, such as melaleuca (*Melaleuca quinquenervia*) and coyote (*Canis latrans*) have been recorded nearby and will soon invade the park. The park and refuge are working together to combat these invaders (see Environmental Factors/Non-native Species).

There are also natural pests, primarily the raccoon and mosquito. The raccoon is a serious marauder on sea turtle nests. The park has implemented a nest protection program which has significantly reduced nest depredation (see discussion on sea turtles under Animals/Reptiles). Mosquitoes can be quite voracious during wet periods of the year. The majority of wetlands bordering Mosquito Lagoon were ditched and/or impounded prior to the park's creation. Under agreements with NASA and State of Florida, current or former land owners of the park lands, CANA is required to allow mosquito control. The park is working with several state and local agencies to do this in the most environmentally-friendly way. At the same time many impounded areas are being reconnected to the lagoon by culverts or restored by total removal of the dikes (see Environmental Factors/Pests for more on mosquito control).

A note to the visitor, CANA is a beautiful place with pristine beaches, picturesque hammocks and wide expanses of open lagoon. However, it can be dangerous and must be treated with respect. Sudden and violent thunderstorms occur in warmer months, intense heat can lead to heat exhaustion or sunstroke and rip tides can

entrap the unwary swimmer. Biting insects, primarily mosquitos and gnats, are a major nuisance at times. With the threat of West Nile virus and encephalitis, precautions should be taken to minimize the chances of being bit. Come prepared and you will be able to safely enjoy this rare remnant of natural Florida.